

REMARKS

Claims 1, 3, 7, and 13 have been amended, while claim 10 has been canceled without prejudice and claims 14-18 have been added. Applicant respectfully traverses the Office's rejections and, in view of the foregoing amendments and the following remarks, respectfully requests that the Office issue a Notice of Allowance.

ALLOWABLE SUBJECT MATTER

In the Outstanding Action, the Office indicates that a limitation of claim 3 recites allowable subject matter. Office Action of 2008/03/04, p. 8. Specifically, the Office states the following:

Allowable Subject Matter

6. In Claim 3 a single limitation is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. *In claim 3, the limitation, "determining an orientation angle using the arctangent of the number of changes in binary values along one or more columns divided by the number of changes in binary values along one or more rows." None of the references teach this claim limitation.*

Office Action, p. 8.

Applicant thanks the Office for this indication. For the sole purpose of expediting allowance and without conceding the propriety of the rejection of claim 1, Applicant has amended claim 1 to include this limitation from claim 3.

For at least this reason, Applicant respectfully submits that claim 1 stands allowable.

§§ 102 AND 103 REJECTIONS

Claims 1, 7, and 9-13 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,463,720 to Granger (hereinafter, “Granger”).

Claims 2-6 and 8 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Granger in view of U.S. Patent No. 7,031,025 to He et al. (hereinafter, “He”).

Applicant respectfully traverses the rejections. Nevertheless, Applicant has amended independent claims 1 and 7 in the manner discussed during the interview for the sole purpose of advancing prosecution and without conceding the propriety of the Office’s rejections.

THE CLAIMS

Claim 1 recites a method comprising (added language underlined):

- filtering a scanned image to obtain a transformed image, wherein the transformed image comprises a series of substantially parallel lines of alternating binary pixel values; and
- determining an orientation angle of the scanned image using properties of the transformed image, wherein determining an orientation angle of the scanned image using properties of the transformed image comprises determining an orientation angle using the arctangent of an estimated number of changes in binary pixel values along one or more columns of the transformed image divided by an estimated number of changes in binary pixel values along one or more rows of the transformed image

In making out a rejection of claim 1, the Office alleges that Granger anticipates. Applicant respectfully disagrees. Nevertheless, for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended this claim as discussed above. Specifically, Applicant has amended this claim to include subject matter from claim 3 indicated as allowable in the outstanding Action and during the afore-mentioned interview.

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Claims 2-6 depend from claim 1 and, as such, the remarks made above in regards to claim 1 apply equally to these claims. These claims are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest.

Claim 7 recites a computer-readable medium comprising computer-executable instructions that, when executed, direct a computer to (added language underlined):

- remove meaningful image information from a scanned image to generate a transformed image;
- determine an orientation angle of the scanned image using the transformed image;
- subtract a printing angle from the orientation angle to estimate a rotation angle; and
- rotate the scanned image through the rotation angle.

In making out a rejection of this claim, the Office alleges that Granger anticipates. Applicant respectfully disagrees. Nevertheless, for the sole purpose of

expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended this claim to recite subject matter previously recited in claim 13. In making out a rejection of claim 13, the Office also states that Granger anticipates. Applicant respectfully disagrees, and instead respectfully submits that neither Granger nor the remaining cited references has been shown to disclose or suggest "subtract[ing] a printing angle from the orientation angle to estimate a rotation angle" and "rotat[ing] the scanned image through the rotation angle."

Instead, Granger relates to a technique for use in a tile oriented digital screener *for suppressing screener induced image artifacts* through use of "blue noise" based selection among a number of different halftone dot fonts. Specifically, in producing a screened halftone dot pattern for any density value, a two-dimensional seamless matrix of blue noise correlated uniformly distributed integer values is used to select one of a number of different halftone dot fonts that will be produced for any halftone density value. The amount of blue noise in the matrix is specifically tailored, both in amplitude and frequency response, to *substantially suppress all low frequency image artifacts and place resulting screening errors at sufficiently high spatial frequencies so as to render these errors essentially invisible to a human observer*. Granger, abstract (emphasis added).

In sum, Granger relates to "suppressing screener induced image artifacts" in order to "render these errors essentially invisible to a human observer." Id. Granger, however, entirely fails disclose or suggest "subtract[ing] a printing angle from the orientation angle to estimate a rotation angle" in order to "rotate the scanned image through the rotation angle."

In stating that Granger discloses “subtract[ing] a printing angle from the orientation angle to estimate a rotation angle,” the Office cites to Granger’s “fig. 33 and column 38, lines 60-64, i.e., subtracting referred to [as] difference.” Office Action, p. 5. For the Office’s convenience, Applicant reproduces this cited text below:

Generally speaking, *the human visual system has three separate response channels*: two chrominance channels (*particularly color differences*) and one luminance channel. The luminance channel exhibits a typical bandpass response, with a peak at approximately 1 line/mm at normal viewing distances and half power points at approximately 0.5 line/mm.

Granger, col. 38, lines 58-64 (emphasis added).

As the reproduced passage demonstrates, this Granger citation relates to the “*human visual system*.” Furthermore, the “differences” that Granger speaks of relates to the human visual system’s ability to understand “*color differences*”. Applicant respectfully submits that these “*color differences*” perceptible by the human visually system entirely fails to disclose or suggest “*subtract[ing] a printing angle* from the orientation angle to estimate a rotation angle.” (emphasis added).

As such, Applicant respectfully submits that the cited references have not been shown to disclose or suggest “subtract[ing] a printing angle from the orientation angle to estimate a rotation angle” in order to “rotate the scanned image through the rotation angle,” as recited in Applicant’s amended claim 7.

For at least this reason, this claim stands allowable.

Claims 8-9 and 11-13 depend from claim 7 and, as such, the remarks made above in regards to claim 7 apply equally to these claims. These claims are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest.

NEW CLAIMS

Claim 14 recites a method comprising:

- filtering a scanned image to obtain a transformed image, wherein the transformed image comprises a series of substantially parallel lines of alternating binary pixel values;
- determining an orientation angle of the scanned image using properties of the transformed image;
- subtracting a printing angle from the orientation angle to estimate a rotation angle; and
- rotating the scanned image through the rotation angle.

In the current Response, Applicant adds claims 14-18. Applicant respectfully submits that independent claim 14 stands allowable for at least reasons similar to those discussed above in regards to independent claim 7. Specifically, Applicant respectfully submits that neither Granger—nor the remaining cited references—has been shown to disclose or suggest “subtracting a printing angle from the orientation angle to estimate a rotation angle” and “rotating the scanned image through the rotation angle,” as recited in new claim 14.

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Claims 15-18 depend from claim 14 and, as such, the remarks made above in regards to claim 14 apply equally to these claims. These claims are also allowable for their own recited features, which the references of record have not been shown to disclose, teach, or suggest.

CONCLUSION

For at least the foregoing reasons, claims 1-9 and 11-18 are in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections and an early notice of allowance. If any issue remains unresolved that would prevent allowance of this case, Applicant respectfully requests the Office to contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

Lee & Hayes, PLLC
421 W. Riverside Avenue, Suite 500
Spokane, WA 99201

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/Robert G. Hartman 58,970/

Robert G. Hartman
Reg. No. 58,970
(509) 324-9256 ext. 265